with five states, annual cycle and time horizon (TH) of 10 years, with discount rate of 5% was developed. A transition probability for total cause mortality was derived from a administrative database of a teaching hospital after record linkage with national registry of mortality database and an analysis of propensity score matching. Non-fatal endpoints were derived after a random effect meta-analysis. Utility measures was calculated with a validated model to derive values from published domains of SF-36 QoL questionnaire. Direct Costs were analyzed from the Brazilian public health perspective. **RESULTS:** 2100 patients were propensity matched, 1050 non-statins users (CG) and 1050 statins users (SG) with previous cardiovascular disease, with mean follow-up of 5 years and mean age of 60 years. Treatment effects on the treatment group considering all statins users reduced the total cause mortality in 0,8% (CI 95% -0,015%;-0,08%). ICER comparing SG with CG, in a 10 year TH, for simvastatin 10mg, 40 mg and atorvastatin 10 mg were, USD1.657.00, USD4.431.00 and R$5.449.94, respectively. **CONCLUSIONS:** Real world evidence demonstrated that statins are less effective than RCT evidence to reduce all cause mortality in secondary prevention but with very cost-effectiveness strategy according to WHO thresholds.

PCV126

COST-EFFECTIVENESS OF EDOXABAN COMPARED WITH OTHER LICENSED NOACS FOR THE PREVENTION OF STROKE AND SYSTEMIC EMBOLIC EVENTS IN THE UK

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OBJECTIVES: This evaluation aimed to assess cost-effectiveness of once-daily edoxaban 60mg (30mg dose-reduced) compared with other licenced non-VKA oral anticoagulants (NOACs) for prevention of stroke and systemic embolic events among patients with non-valvular atrial fibrillation (NVAF) in the UK. **METHODS:** A Markov model was developed to simulate the course of disease and resource utilisation in a hypothetical cohort of patients receiving edoxaban or the other NOACs currently licensed for use in the UK: apixaban, dabigatran and rivaroxaban. In the absence of head-to-head clinical studies between NOACs, a network meta-analysis was conducted to estimate the relative efficacy and safety of edoxaban compared with all treatments of interest. Where data were available, the analysis was based on patients with CHADS2≥2; otherwise, the entire study population was used. Health outcomes were assessed in quality-adjusted life years (QALYs). Utilities and costs were extracted from the literature and the NHS reference cost database and discounted at 3.5% per annum. Outcomes were evaluated over a lifetime time horizon. The average age of patients entering the model was 72, as in the ENGAGE-AF study. Sensitivity analyses were conducted to evaluate the effect of uncertainty in inputs on the results. **RESULTS:** Edoxaban was dominant compared with rivaroxaban and dabigatran 110 mg BD. Edoxaban was dominated by apixaban and dabigatran 150 mg BD. Lifetime differences between edoxaban and comparators ranged from £394 to -£787 and 0.08 to -0.08 QALYs. Sensitivity analyses indicate the findings were robust. **CONCLUSIONS:** Accepting the limitations of modelling with restricted data availability and absent head-to-head trials, this analysis suggests that edoxaban is associated with similar outcomes to the other NOACs in the UK setting. Edoxaban is dominant compared with the most widely prescribed once-daily NOAC, rivaroxaban. Both dabigatran and apixaban are given twice daily, and apixaban has a higher acquisition cost than the other NOACs.

PCV127

ECONOMIC EVALUATION OF A PHARMACOGENOMIC TEST FOR STATIN-INDUCED MYOPATHY IN CARDIOVASCULAR HIGH-RISK PATIENTS INITIATING A STATIN

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OBJECTIVES: Statins are the cornerstone of cardiovascular disease prevention reducing individual cardiovascular risk by as much as 25% to 35%. One reason for interrupting statin therapy is statin-induced myopathy. Myopathy is a general term for muscular skeletal disease that can range from muscle pain to rhabdomyolysis. The incidence rate of statin-induced myopathies has been reported to range from 10% to 20%. The objective of the present study was to evaluate the economic value of a pharmacogenomic (PGx) test for the diagnosis of statin-induced myopathy. **METHODS:** We developed a Markov model to investigate the economic value of a PGx test to diagnose statin-induced myopathy from the perspective of the Ministry of Health. The model assumes that only patients who experienced muscular skeletal pain (MSP) are tested and that patients and physicians are fully compliant to the test results. For simplification purposes, we assumed that, without a PGx test, all patients experiencing MSP interrupt their statin. The cost of the PGx test is assumed at $250. **RESULTS:** The results of the model show that the PGx test is a dominant strategy with a perfect test and remains nearly cost neutral with an imperfect PGx test having 20% of false positive and false negative rates (i.e., incremental cost of $85) yielding an incremental cost-utility ratio (ICUR) of $451 per quality-adjusted life year (QALY). Deterministic sensitivity analyses show that the most influential model parameters are associated with statin efficacy. The results of the probabilistic sensitivity analysis show that at a willingness-to-pay of $5,850 per QALY, 90% of the model simulations favor the PGx test strategy. **CONCLUSIONS:** The model shows that a PGx test for the diagnosis of statin-induced myopathy in patients with MSP having ≤20% of false positive and false negative test results, is an optimal strategy at all accepted conventional willingness-to-pay ICUR thresholds.

PCV128

SYSTEMATIC REVIEW OF PRODUCTIVITY LOSSES ASSOCIATED WITH CARDIOVASCULAR DISEASE IN EUROPE

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OBJECTIVES: People with cardiovascular disease (CVD) often require time off work to recover from illness or surgery (e.g. post-myocardial infarction (MI) or stroke, individuals incur income losses and output is reduced for employers and the wider economy). A systematic review was conducted to identify studies reporting the magnitude of these losses for European populations, for use in economic analyses. **METHODS:** A systematic search was conducted in January/February 2015 using Medline, Embase, the Cochrane Library, and Google, to identify studies published since 2004 reporting productivity losses from CVD overall or pre-defined cardiovascular conditions (coronary heart disease, MI, stroke, transient ischemic attack, angina, heart failure, peripheral artery disease, coronary revascularization). Studies were classified by: country; average patient or population outcomes; human capital or friction cost method; scope of losses (absenteeism [work days missed for illness/recovery], presenteeism, early retirement/unemployment, premature mortality); CVD conditions/events. Outcomes were standardized where possible and adjusted to 2015 prices. **RESULTS:** Twenty-five European studies were identified. Twelve reported population costs and one reported population productive years of life lost only. Monetary losses were generally assessed using the human capital (12 studies) rather than friction cost method (4 studies). Annual productivity losses from all CVD across 6 countries ranged from €1.4 billion (absenteeism) to €19.7 billion (premature mortality). One UK study reported substantially higher annual absenteeism costs of £9.28 billion (£3.60 billion friction-adjusted) while mortality costs were less at £5.23 billion. Twelve studies reported average losses from absenteeism (10 studies) and/or early retirement (2 studies). Inter-study variations in results reflect different methods and scopes, although productivity losses were substantial across different countries and methods. **CONCLUSIONS:** CVD is associated with substantially high CVD morbidity and mortality costs. This systematic review comprehensively documents these losses published for European populations, and is useful for populating economic models or burden-of-disease studies that adopt a societal perspective.

PCV129

SYSTEMATIC REVIEW OF HYPERKALEMIA DUE TO ANGIOTENSIN ENZYME CONVERTING INHIBITORS

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OBJECTIVES: Hyperkalemia can develop as a result of treatment with angiotensin-converting–enzyme inhibitors or angiotensin-receptor blockers. This side effect is most common in patients with risk factors such as diabetes mellitus, heart failure, chronic kidney disease, or advanced age. The objective of this research was to conduct a systematic review on hyperkalemia caused due to angiotensin-converting–enzyme inhibitors. **METHODS:** A systematic literature search for epidemiology and the burden of disease studies was undertaken for the databases Pubmed, Embase, Biosis, Google Scholar and Cochrane. Data was collected for the study type, methods, country and key findings. Extracted study data included hyperkalemia incidence, complications, mortality, available treatment options, as well as healthcare resource utilization and medical costs associated with hyperkalemia. **RESULTS:** A total of 321 studies were identified based on the keywords. Of these, 23 studies met the inclusion criteria. Although the prevalence of hyperkalemia in the general population is unknown, it is present in 1-10% of hospitalized patients. Hyperkalemia is a common problem in patients with conditions that reduce potassium excretion, especially when treated with beta-adrenergic blockers that inhibit Na+,K+-ATPase activity or RAAS inhibitors (RAASIs) [angiotensin-converting-enzyme inhibitors (ACEIs), angiotensin receptor blockers (ARBs), mineralocorticoid receptor antagonists or renin inhibitors] that decrease aldosterone excretion. Hyperkalemia has been attributed to the use of ACE inhibitors in 10 to 38 percent of hospitalized patients with this complication. Hyperkalemia develops in approximately 10 percent of outpatients within a year after ACE inhibitors are prescribed. A study suggested that the mortality and morbidity from hyperkalemia as a result of combined treatment with ACE inhibitors and spironolactone may outweigh the potential long-term benefits in certain high-risk patients. **CONCLUSIONS:** Our review shows that there is high burden of hyperkalemia in patients using ACE inhibitors. There is a need for quick, safe and effective treatments for hyperkalemia.

PCV130

RESOURCE UTILISATION AND BLEEDING EVENTS DURING ANTICOAGULATION TREATMENT: REAL-WORLD FINDINGS FROM ENGLAND

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OBJECTIVES: Over one million UK patients suffer from non-valvular atrial fibrillation (NVAF), which can lead to stroke and arterial embolism. Vitamin K antagonists (VKA), usually warfarin, are the most frequently-prescribed anticoagulants in the UK. This study aimed to estimate the association between healthcare resource use and subsequent bleeding in NVAF patients prescribed VKA in England. **METHODS:** A retrospective cohort analysis of primary care data from the UK Clinical Practice Research Datalink (CPRD), linked to secondary care data from the Hospital Episode Statistics (HES) database, identified patients with NVAF who were prescribed a VKA. Bleeding events were identified (any bleeds [AB] as a composite of major bleed [MB] + clinically-relevant non-major bleeds [CRNMB]). Resources utilised by patients (GP consultations, total prescriptions, hospitalisations) were estimated. To compare resource utilization in time after bleeding events versus time with no bleeding events, we used log-Poisson generalized linear models with robust variances to calculate incidence rate ratios (IRR) and 95% CIs adjusted on baseline patient characteristics. **RESULTS:** A cohort of 29,489 NVAF patients newly-treated with VKA were identified, with mean age of 73.4 years, 57.8% male, mean BMI 29.1, mean CHA2DS2-VASC 2.7, and mean HAS-BLED 2.0. Of these patients, 14.6% had experienced a prior bleeding event. Each month there were a mean 2.6 GP consultations, 0.1 hospitalizations, and 7 prescriptions per patient. We observed an increased risk of overall prescriptions following a 1st bleed (IRR 1.12; 1.09-1.16), 2nd bleed (1.18; 1.12-1.24) and 3rdbleed (1.25; 1.16-1.36) compared